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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/606,884 | 06/26/2003 | Jeffrey D. Rohe | 89190.070703/DP310347 | 5407 |

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EXAMINER

CORRIGAN, JAIME W

ART UNIT PAPER NUMBER

3748

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,884

Applicant(s)

ROHE ET AL.

Examiner

Jaime W Corrigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kreuter (PN 6,131,545).

Regarding claims 1, 11, 21 Kreuter discloses a control shaft assembly including at least one shaft segment having a shaft axis (See Figure 1 (18)) and at least one pivot (See Figure 1 (10)) segment having a pivot axis, said shaft axis being substantially parallel relative to and spaced apart from said pivot axis (See Figure 1 (10), (18)), each of said pivot and said shaft axes being substantially parallel relative to and spaced apart from the central axis of the camshaft (See Figure 1 (4)), said control shaft assembly being pivotable (See Column 4 Lines 55-59) relative to said pivot axis; an integrated body (See Figure 1 (26)) pivotally disposed on said at least one shaft segment, said integrated body including an input cam follower (Portion contacting (24)) and at least one output cam surface (See Figures 1-2 (28)), said input cam follower configured for engaging the input cam lobe, said at least one output cam surface configured for engaging a corresponding output cam follower (See Figure 1 (10)) of the engine; and a

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spring (See Figure 3 (42)) engaging said integrated body and configured for biasing (See Column 4 Lines 36-42) said input cam follower into engagement with the input cam lobe.

Regarding claims 2, 12 Kreuter discloses each said at least one output cam surface comprises a base circle portion and a lift portion (See Figure 1 (28)).

Regarding claims 3, 13 Kreuter discloses each said at least one output cam surface is integral and monolithic with said integrated body (See Figure 1 (26), (28)).

Regarding claims 4, 14 Kreuter discloses integrated body defines an orifice (See Figure 1 (18) inserted in orifice) therethrough, at least a portion of said shaft (See Figure 1 (18)) segment being received within said orifice.

Regarding claims 5, 15 Kreuter discloses a bearing insert (See Figure 1 (14)) disposed within said orifice, said portion of said shaft (See Figure 1 (18)) segment being received within said bearing insert.

Regarding claims 6, 16 Kreuter discloses said input cam follower comprises a roller (See Figure 1 (14)) pivotally coupled to said integrated body.

Regarding claims 7, 17 Kreuter discloses said spring comprises a torsion spring (See Figure 3 (42)) having first and second coils (See Figure 3 (42)), first and second arm (See Figure 3 (42)) portions extending from said first and second coils, respectively, said first and second coils disposed on respective and opposite sides (See Figure 3 (42)) of said integrated body, said shaft segment extending through (See Figure 3 (18)) said first and second coils.

Regarding claims 8, 18 Kreuter discloses said control shaft assembly further includes spring-tab-receiving features (See Figure 3 (18), (42)), said arms further comprising respective tabs, each of said tabs being received at least partially within said spring-tab receiving features (See Figure 3 (18), (42)).

Regarding claims 9, 19 Kreuter discloses said spring-tab receiving features comprise one of grooves and orifices (See Figure 3 (18), (42)).

Regarding claims 10, 20 Kreuter discloses said integrated body defines a central recess (See Figure 3 (18), (42)), said spring arms conjunctively defining a central tab (See Figure 3 (18), (42)), said central tab engaging said central recess.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Onoue (PN 6,705,264), Klotz (PN 6,584,943), Himself (PN US

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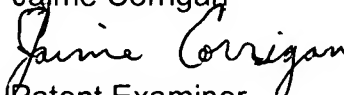
2001/0052329A1), Cecur (PN 6,588,387) disclose similar variable valve actuating mechanisms.

Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.


JC

Jaime Corrigan

Patent Examiner

April 15, 2004

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THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700